

SEQUENCE LISTING

<110> Robert, Bruno  
Donda, Alena  
Cesson, Valerie  
Mach, Jean-Pierre  
Zauderer, Maurice

<120> Targeted CD1d Molecules

<130> 1843.0200001

<150> PCT/US03/030238

<151> 2003-09-26

<150> EP 02405838.0

<151> 2002-09-27

<160> 54

<170> PatentIn version 3.2

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<212> PRT

<213> Artificial Sequence

<220>

<223> Artificial linker peptide

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<213> Artificial Sequence

<220>

<223> Artificial linker peptide

<400> 2

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ala Ser  
1 5 10 15

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<211> 38

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<213> Artificial Sequence

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<223> F(ab)-avidin sense fragment

<400> 3

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 <213> Artificial Sequence  
  
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 <223> F(ab)-avidin antisense fragment  
  
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 <223> F(ab')<sub>2</sub>-avidin sense fragment  
  
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 aattgcggcc gcaaaccatg ggatggagct gtatcatc 38

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 <213> Artificial Sequence  
  
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 <223> IgG1-avidin sense fragment  
  
 <400> 7  
 aattgcggcc gcaaaccatg ggatggagct gtatcatc 38

<210> 8  
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 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> IgG1-avidin antisense fragment  
  
 <400> 8  
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 <223> Chick avidin sense primer  
  
 <400> 9  
 cggggtaccg gaggcggtgg gtcagccaga aagtgctcgc 40

<210> 10  
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 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Chick avidin antisense primer  
  
 <400> 10  
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<210> 11  
 <211> 823  
 <212> DNA  
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 <223> F(ab)-Avidin nucleotide construct  
  
 <400> 11  
 gcggccgcaa accatgggat ggagctgtat catcctcttc ttggtagcaa cagctacagg 60  
 cgcgcatatg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc 120  
 accctcctcc aagagcacct ctggggggcac agcggccctg ggctgcctgg tcaaggacta 180  
 cttccccgaa cgggtgacgg tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac 240  
 cttcccggtc gtccctacagt cctcaggact ctactccctc agcagcgctc tgaccgtgcc 300  
 ctccagcagc ttggggcacc agacctacat ctgcaacgtg aatcacaagc ccagcaacac 360  
 caaggtggac aagaaaggag gcggtgggtc aggtaccgga ggcggtgggt cagccagaaa 420  
 gtgctcgctg actgggaaat ggaccaacga tctgggctcc aacatgacca tcggggctgt 480  
 gaacagcaga ggtgaattca caggcaccta catcacagcc gtaacagcca catcaaata 540  
 gatcaaagag tcaccactgc atgggacaca aaacaccatc aacaagagga cccagcccac 600  
 ctttggcttc accgtcaatt ggaagttttc agagtccacc actgtcttca cggggcagtg 660  
 cttcatagac aggaatggga aggaggtcct gaagaccatg tggctgctgc ggtcaagtgt 720  
 taatgacatt ggtgatgact ggaaagctac cagggtcggc atcaacatct tcaactgcct 780  
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<220>  
 <223> F(ab)-Avidin polypeptide construct

<400> 12

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 1 5 10 15

Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val  
 20 25 30

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala  
 35 40 45

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser  
 50 55 60

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val  
 65 70 75 80

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro  
 85 90 95

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys  
 100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Lys Gly Gly Gly Gly Ser Gly Thr  
 115 120 125

Gly Gly Gly Gly Ser Ala Arg Lys Cys Ser Leu Thr Gly Lys Trp Thr  
 130 135 140

Asn Asp Leu Gly Ser Asn Met Thr Ile Gly Ala Val Asn Ser Arg Gly  
 145 150 155 160

Glu Phe Thr Gly Thr Tyr Ile Thr Ala Val Thr Ala Thr Ser Asn Glu  
 165 170 175

Ile Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile Asn Lys Arg  
 180 185 190

Thr Gln Pro Thr Phe Gly Phe Thr Val Asn Trp Lys Phe Ser Glu Ser  
 195 200 205

Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn Gly Lys Glu  
 210 215 220

Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn Asp Ile Gly  
 225 230 235 240

Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn Ile Phe Thr Arg Leu  
 245 250 255

Arg Thr Gln Lys Glu Thr Gly His His His His His His  
 260 265

<210> 13  
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 <213> Artificial Sequence

<220>  
 <223> F(ab')<sub>2</sub>-Avidin nucleotide construct

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 accctcctcc aagagcacct ctgggggcac agcggccctg ggctgcctgg tcaaggacta 180  
 cttccccgaa ccggtgacgg tgctgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac 240  
 cttcccggct gtctacagt cctcaggact ctactcctc agcagcgctg tgaccgtgcc 300  
 ctccagcagc ttgggcaccc agacctacat ctgcaacgtg aatcacaagc ccagcaacac 360  
 caaggtggac aagaaagttg agcccaaadc ttgtgacaaa actcacacat gcccaccgtg 420  
 cccaggaggc ggtgggtcag gtaccggagg cgggtgggtca gccagaaagt gctcgctgac 480  
 tgggaaatgg accaacgacg tgggctccaa catgaccatc ggggctgtga acagcagagg 540  
 tgaattcaca ggcacctaca tcacagccgt aacagccaca tcaaagagtc tcaaagagtc 600  
 accactgcat gggacacaaa acaccatcaa caagaggacc cagcccacct ttggcttcac 660  
 cgtcaattgg aagttttcag agtccaccac tgtcttcacg ggccagtgtc tcatagacag 720  
 gaatgggaag gaggtcctga agaccatgtg gctgctgcgg tcaagtgtta atgacattgg 780  
 tgatgactgg aaagctacca gggtcgcat caacatcttc actcgctgc gcacacagaa 840  
 ggagaccggt catcatcacc atcaccattg a 871

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<223> F(ab')<sub>2</sub>-Avidin polypeptide construct

<400> 14

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Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val  
20 25 30

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala  
35 40 45

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser  
50 55 60

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val  
65 70 75 80

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro  
85 90 95

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys  
100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp  
115 120 125

Lys Thr His Thr Cys Pro Pro Cys Pro Gly Gly Gly Gly Ser Gly Thr  
130 135 140

Gly Gly Gly Gly Ser Ala Arg Lys Cys Ser Leu Thr Gly Lys Trp Thr  
145 150 155 160

Asn Asp Leu Gly Ser Asn Met Thr Ile Gly Ala Val Asn Ser Arg Gly  
165 170 175

Glu Phe Thr Gly Thr Tyr Ile Thr Ala Val Thr Ala Thr Ser Asn Glu  
180 185 190

Ile Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile Asn Lys Arg  
195 200 205

Thr Gln Pro Thr Phe Gly Phe Thr Val Asn Trp Lys Phe Ser Glu Ser  
210 215 220

Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn Gly Lys Glu  
 225 230 235 240

Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn Asp Ile Gly  
 245 250 255

Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn Ile Phe Thr Arg Leu  
 260 265 270

Arg Thr Gln Lys Glu Thr Gly His His His His His His  
 275 280 285

<210> 15  
 <211> 1522  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> IgG1 Avidin nucleotide construct

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 accctcctcc aagagcacct ctggggggcac agcggccctg ggctgcctgg tcaaggacta 180  
 cttccccgaa ccggtgacgg tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac 240  
 cttcccggct gtctacagt cctcaggact ctactccctc agcagcgctg tgaccgtgcc 300  
 ctccagcagc ttgggcaccc agacctacat ctgcaacgtg aatcacaagc ccagcaacac 360  
 caaggtggac aagaaagttg agcccaaatc ttgtgacaaa actcacacat gcccaccgtg 420  
 cccagcacct gaactcctgg ggggaccgtc agtcttctc tccccccaa aaccaagga 480  
 caccctcatg atctcccga cccctgaggt cacatgcgtg gtggtggacg tgagccacga 540  
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 aaagccgcgg gaggagcagt acaacagcac gtaccgtgtg gtcagcgtec tcaccgtcct 660  
 gcaccaggac tggctgaatg gcaaggagta caagtgaag gtctccaaca aagccctccc 720  
 agcccccatc gagaaaacca tctccaaagc caaagggcag ccccgagaac cacagggtgta 780  
 caccctgccc ccatcccggg atgagctgac caagaaccag gtcagcctga cctgcctggg 840  
 caaaggcttc tatcccagcg acatcgccgt ggagtgggag agcaatgggc agccggagaa 900  
 caactacaag accacgcctc ccgtgctgga ctccgacggc tccttcttcc tctacagcaa 960  
 gctcaccgtg gacaagagca ggtggcagca ggggaacgtc ttctcatgct ccgtgatgca 1020

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tgaggctctg cacaaccact acacgcagaa gagcctctcc ctgtctccgg gtaaaggagg 1080
cggtgggtca ggtaccggag gcggtgggtc agccagaaag tgctcgctga ctgggaaatg 1140
gaccaacgat ctgggctcca acatgaccat cggggctgtg aacagcagag gtgaattcac 1200
aggcacctac atcacagccg taacagccac atcaaagag atcaaagagt caccactgca 1260
tgggacacaa aacaccatca acaagaggac ccagcccacc tttggcttca ccgtcaattg 1320
gaagttttca gaggccacca ctgtcttcac gggccagtgc ttcatagaca ggaatgggaa 1380
ggaggtcctg aagaccatgt ggctgctgcg gtcaagtgtt aatgacattg gtgatgactg 1440
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<210> 16

<211> 502

<212> PRT

<213> Artificial Sequence

<220>

<223> IgG1 Avidin polypeptide construct

<400> 16

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Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
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Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
          20           25           30

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Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
      35           40           45

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Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
      50           55           60

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Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
65           70           75           80

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Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
      85           90           95

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Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
      100           105           110

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Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
      115           120           125

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Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly  
 130 135 140

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile  
 145 150 155 160

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu  
 165 170 175

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His  
 180 185 190

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg  
 195 200 205

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys  
 210 215 220

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu  
 225 230 235 240

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr  
 245 250 255

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu  
 260 265 270

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp  
 275 280 285

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val  
 290 295 300

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp  
 305 310 315 320

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His  
 325 330 335

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro  
 340 345 350

Gly Lys Gly Gly Gly Gly Ser Gly Thr Gly Gly Gly Gly Ser Ala Arg  
 355 360 365

Lys Cys Ser Leu Thr Gly Lys Trp Thr Asn Asp Leu Gly Ser Asn Met

370                      375                      380  
 Thr Ile Gly Ala Val Asn Ser Arg Gly Glu Phe Thr Gly Thr Tyr Ile  
 385                      390                      395                      400  
 Thr Ala Val Thr Ala Thr Ser Asn Glu Ile Lys Glu Ser Pro Leu His  
                     405                      410                      415  
 Gly Thr Gln Asn Thr Ile Asn Lys Arg Thr Gln Pro Thr Phe Gly Phe  
                     420                      425                      430  
 Thr Val Asn Trp Lys Phe Ser Glu Ser Thr Thr Val Phe Thr Gly Gln  
                     435                      440                      445  
 Cys Phe Ile Asp Arg Asn Gly Lys Glu Val Leu Lys Thr Met Trp Leu  
                     450                      455                      460  
 Leu Arg Ser Ser Val Asn Asp Ile Gly Asp Asp Trp Lys Ala Thr Arg  
 465                      470                      475                      480  
 Val Gly Ile Asn Ile Phe Thr Arg Leu Arg Thr Gln Lys Glu Thr Gly  
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 <211> 57  
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 <213> Artificial Sequence

<220>  
 <223> BirA Sense Sequence

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<210> 18  
 <211> 57  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> BirA Antisense Sequence

<400> 18  
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<210> 19  
 <211> 34

<212> DNA  
 <213> Artificial Sequence

<220>  
 <223> E1 sense sequence

<400> 19  
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<210> 20  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> E1 antisense

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<210> 21  
 <211> 978  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Construct of nucleotide sequence for extracellular domain of CD1d

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 aatagcagct ggacgcgcac cgacggcttg gctgtggctgg gggagctgca gacgcacagc 180  
 tggagcaacg actcggacac cgtccgctct ctgaagcctt ggtcccaggg cacgttcagc 240  
 gaccagcagt gggagacgct gcagcatata tttcgggttt atcgaagcag cttcaccagg 300  
 gacgtgaagg aattcgccaa aatgctacgc ttatcctatc ccttggagct ccagggtgtcc 360  
 gctggctgtg aggtgcaccc tgggaacgcc tcaaataact tcttccatgt agcatttcaa 420  
 ggaaaagata tcctgagttt ccaaggaact tcttgggagc caaccaaga ggccccactt 480  
 tgggtaaact tggccattca agtgcctaac caggacaagt ggacgagggg aacagtgcag 540  
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 gaactgaaga agcaagtga gcccaggcc tggctgtccc gtggccccag tcctggccct 660  
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 gacgagacat ggtatctccg agcaaccctg gatgtggtgg ctggggaggc agctggcctg 840  
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catcaccatc accattga 978

<210> 22  
<211> 322  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Construct of polypeptide sequence for extracellular domain of CD1d

<400> 22

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1 5 10 15

Gly Ser Ala Glu Val Pro Gln Arg Leu Phe Pro Leu Arg Cys Leu Gln  
20 25 30

Ile Ser Ser Phe Ala Asn Ser Ser Trp Thr Arg Thr Asp Gly Leu Ala  
35 40 45

Trp Leu Gly Glu Leu Gln Thr His Ser Trp Ser Asn Asp Ser Asp Thr  
50 55 60

Val Arg Ser Leu Lys Pro Trp Ser Gln Gly Thr Phe Ser Asp Gln Gln  
65 70 75 80

Trp Glu Thr Leu Gln His Ile Phe Arg Val Tyr Arg Ser Ser Phe Thr  
85 90 95

Arg Asp Val Lys Glu Phe Ala Lys Met Leu Arg Leu Ser Tyr Pro Leu  
100 105 110

Glu Leu Gln Val Ser Ala Gly Cys Glu Val His Pro Gly Asn Ala Ser  
115 120 125

Asn Asn Phe Phe His Val Ala Phe Gln Gly Lys Asp Ile Leu Ser Phe  
130 135 140

Gln Gly Thr Ser Trp Glu Pro Thr Gln Glu Ala Pro Leu Trp Val Asn  
145 150 155 160

Leu Ala Ile Gln Val Leu Asn Gln Asp Lys Trp Thr Arg Glu Thr Val  
165 170 175

Gln Trp Leu Leu Asn Gly Thr Cys Pro Gln Phe Val Ser Gly Leu Leu

180					185					190						
Glu	Ser	Gly	Lys	Ser	Glu	Leu	Lys	Lys	Gln	Val	Lys	Pro	Lys	Ala	Trp	
195					200					205						
Leu	Ser	Arg	Gly	Pro	Ser	Pro	Gly	Pro	Gly	Arg	Leu	Leu	Leu	Val	Cys	
210					215					220						
His	Val	Ser	Gly	Phe	Tyr	Pro	Lys	Pro	Val	Trp	Val	Lys	Trp	Met	Arg	
225					230					235					240	
Gly	Glu	Gln	Glu	Gln	Gln	Gly	Thr	Gln	Pro	Gly	Asp	Ile	Leu	Pro	Asn	
245					250					255						
Ala	Asp	Glu	Thr	Trp	Tyr	Leu	Arg	Ala	Thr	Leu	Asp	Val	Val	Ala	Gly	
260					265					270						
Glu	Ala	Ala	Gly	Leu	Ser	Cys	Arg	Val	Lys	His	Ser	Ser	Leu	Glu	Gly	
275					280					285						
Gln	Asp	Ile	Val	Leu	Tyr	Trp	Thr	Gly	Gly	Gly	Gly	Leu	Asn	Asp	Ile	
290					295					300						
Phe	Glu	Ala	Gln	Lys	Ile	Glu	Trp	His	Glu	Ser	Gly	His	His	His	His	
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His His																

<210> 23  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> F(ab)-B2M sense construct

<400> 23  
 aattgcggcc gcaaaccatg ggatggagct gtatcatc

38

<210> 24  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> F9ab)-B2M antisense construct

<400> 24  
 cgggggtacct gaccaccgc ctcctttctt gtccaccttg gtgtt

45

<210> 25  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> F(ab')<sub>2</sub>-B2M sense construct  
  
 <400> 25  
 attgcggccg caaaccatgg gatggagctg tatcatc 37

<210> 26  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> F(ab')<sub>2</sub>-B2M antisense construct  
  
 <400> 26  
 cgggggtacct gaccaccgc ctcctgggca cggtagggcat gtgtg 45

<210> 27  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> IgG1-B2M sense construct  
  
 <400> 27  
 aattgcggcc gcaaaccatg ggatggagct gtatcatc 38

<210> 28  
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 <223> IgG1-B2M antisense construct  
  
 <400> 28  
 cgggggtacct gaccaccgc ctcctttacc cggagacagg gagag 45

<210> 29  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> artificial sense primer to construct beta2-microglobulin  
  
 <400> 29  
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<210> 30  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> artificial antisense primer to construct beta2-microglobulin

<400> 30  
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<210> 31  
 <211> 736  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Nucleotide sequence of the chimeric F(ab)-beta2-microglobulin

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 accctcctcc aagagcacct ctggggggcac agcggccctg ggctgcctgg tcaaggacta 180  
 cttccccgaa ccggtgacgg tgctcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac 240  
 cttcccggtc gtctacagt cctcaggact ctactcctc agcagcgctc tgaccgtgcc 300  
 ctccagcagc ttgggcaccc agacctacat ctgcaacgtg aatcacaagc ccagcaacac 360  
 caaggtggac aagaaaggag gcggtgggtc aggtaccgga ggcggtgggt caatccagcg 420  
 tactccaaag attcaggttt actcacgtca tccagcagag aatggaaagt caaatctcct 480  
 gaattgctat gtgtctgggt ttcattccatc cgacattgaa gttgacttac tgaagaatgg 540  
 agagagaatt gaaaaagtgg agcattcaga cttgtctttc agcaaggact ggtctttcta 600  
 tctcttgtag tacactgaat tcacccccac tgaaaaagat gagtatgcct gccgtgtgaa 660  
 ccatgtgact ttgtcacagc ccaagatagt taagtgggat cgagacatga ccggtcatca 720  
 tcaccatcac cattga 736

<210> 32  
 <211> 240  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide sequence of the chimeric F(ab)-beta2-microglobulin

<400> 32

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly  
 1 5 10 15

Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val  
20 25 30

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala  
35 40 45

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser  
50 55 60

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val  
65 70 75 80

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro  
85 90 95

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys  
100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Lys Gly Gly Gly Gly Ser Gly Thr  
115 120 125

Gly Gly Gly Gly Ser Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser  
130 135 140

Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val  
145 150 155 160

Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly  
165 170 175

Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Val Phe Ser Lys Asp  
180 185 190

Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys  
195 200 205

Asp Glu Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser Gln Pro Lys  
210 215 220

Ile Val Lys Trp Asp Arg Asp Met Thr Gly His His His His His His  
225 230 235 240

<210> 33  
<211> 783  
<212> DNA



<213> Artificial Sequence

<220>

<223> Nucleotide sequence of the chimeric F(ab')<sub>2</sub>-beta2-microglobulin

<400> 33

```
gcggccgcaa accatgggat ggagctgtat catcctcttc ttggtagcaa cagctacagg      60
cgcgcatatg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc      120
accctcctcc aagagcacct ctggggggcac agcggccctg ggctgcctgg tcaaggacta      180
cttccccgaa ccggtgacgg tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac      240
cttcccggtc gtcctacagt cctcaggact ctactccctc agcagcgtcg tgaccgtgcc      300
ctccagcagc ttgggcaccc agacctacat ctgcaacgtg aatcacaagc ccagcaacac      360
caaggtggac aagaaagttg agcccaaadc ttgtgacaaa actcacacat gcccaccgtg      420
cccaggaggc ggtgggtcag gtaccggagg cgggtgggtca atccagcgta ctccaaagat      480
tcaggtttac tcacgtcatc cagcagagaa tggaaagtca aatttcctga attgctatgt      540
gtctgggttt catccatccg acattgaagt tgacttactg aagaatggag agagaattga      600
aaaagtggag cattcagact tgtctttcag caaggactgg tctttctatc tcttgtacta      660
cactgaattc acccccactg aaaagatgag tatgcctgcc gtgtgaacca tgtgactttg      720
tcacagccca agatagttaa gtgggatcga gacatgaccg gtcacatca ccatcaccat      780
tga                                                                    783
```

<210> 34

<211> 256

<212> PRT

<213> Artificial Sequence

<220>

<223> Nucleotide sequence of the chimeric F(ab')<sub>2</sub>-beta2-microglobulin

<400> 34

```
Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10           15

Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
          20           25           30

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
          35           40           45

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
          50           55           60
```

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val  
65 70 75 80

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro  
85 90 95

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys  
100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp  
115 120 125

Lys Thr His Thr Cys Pro Pro Cys Pro Gly Gly Gly Gly Ser Gly Thr  
130 135 140

Gly Gly Gly Gly Ser Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser  
145 150 155 160

Arg His Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val  
165 170 175

Ser Gly Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly  
180 185 190

Glu Arg Ile Glu Lys Val Glu His Ser Asp Leu Val Phe Ser Lys Asp  
195 200 205

Trp Ser Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys  
210 215 220

Asp Glu Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser Gln Pro Lys  
225 230 235 240

Ile Val Lys Trp Asp Arg Asp Met Thr Gly His His His His His His  
245 250 255

<210> 35

<211> 1435

<212> DNA

<213> Artificial Sequence

<220>

<223> Nucleotide sequence of the chimeric full IgG1-beta2 microglobulin

<400> 35

gcggccgcaa accatgggat ggagctgtat catcctcttc ttggtagcaa cagctacagg 60

cgcgcatatg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc 120

```

accctcctcc aagagcacct ctggggggcac agcggccctg ggctgcctgg tcaaggacta 180
cttccccgaa ccggtgacgg tgctgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac 240
cttcccggtt gtcctacagt cctcaggact ctactccctc agcagcgctg tgaccgtgcc 300
ctccagcagc ttggggcacc agacctacat ctgcaacgtg aatcacaaagc ccagcaacac 360
caaggtggac aagaaagttg agcccaaadc ttgtgacaaa actcacacat gcccaccgtg 420
cccagcacct gaactcctgg ggggaccgtc agtcttctc tttcccccaa aaccaagga 480
caccctcatg atctcccgga cccctgaggt cacatgcgtg gtggtggacg tgagccacga 540
agaccctgag gtcaagttca actggtacgt ggacggcggt gaggtgcata atgccaagac 600
aaagccgagg gaggagcagt acaacagcac gtaccgtgtg gtcagcgctc tcaccgtcct 660
gcaccaggac tggctgaatg gcaaggagta caagtgaag gtctccaaca aagccctccc 720
agcccccatc gagaaaacca tctccaaagc caaagggcag ccccgagaac cacaggtgta 780
caccctgccc ccatcccggg atgagctgac caagaaccag gtcagcctga cctgcctggt 840
caaaggcttc tatccagcg acatcgccgt ggagtgggag agcaatgggc agccggagaa 900
caactacaag accacgcctc ccgtgctgga ctccgacggc tccttcttcc tctacagcaa 960
gctcaccgtg gacaagagca ggtggcagca ggggaacgtc ttctcatgct ccgtgatgca 1020
tgaggctctg cacaaccact acacgcagaa gagcctctcc ctgtctccgg gtaaaggagg 1080
cgggtgggtc ggtaccggag gcggtgggtc aatccagcgt actccaaaga ttcaggttta 1140
ctcacgtcat ccagcagaga atggaaagtc aaatttctctg aattgctatg tgtctgggtt 1200
tcatccatcc gacattgaag ttgacttact gaagaatgga gagagaattg aaaaagtgga 1260
gcattcagac ttgtctttca gcaaggactg gtctttctat ctcttgactt aactgaatt 1320
caccctcact gaaaaagatg agtatgcctg ccgtgtgaac catgtgactt tgtcacagcc 1380
caagatagtt aagtgggac gagacatgac cggctcatcat caccatcacc attga 1435

```

<210> 36

<211> 473

<212> PRT

<213> Artificial Sequence

<220>

<223> Nucleotide sequence of the chimeric full IgG1-beta2 microglobulin

<400> 36

```

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10           15

```

```

Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
20           25           30

```

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala  
35 40 45

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser  
50 55 60

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val  
65 70 75 80

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro  
85 90 95

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys  
100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp  
115 120 125

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly  
130 135 140

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile  
145 150 155 160

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu  
165 170 175

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His  
180 185 190

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg  
195 200 205

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys  
210 215 220

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu  
225 230 235 240

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr  
245 250 255

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu  
260 265 270

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp  
 275 280 285

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val  
 290 295 300

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp  
 305 310 315 320

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His  
 325 330 335

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro  
 340 345 350

Gly Lys Gly Gly Gly Gly Ser Gly Thr Gly Gly Gly Gly Ser Ile Gln  
 355 360 365

Arg Thr Pro Lys Ile Gln Val Tyr Ser Arg His Pro Ala Glu Asn Gly  
 370 375 380

Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser Gly Phe His Pro Ser Asp  
 385 390 395 400

Ile Glu Val Asp Leu Leu Lys Asn Gly Glu Arg Ile Glu Lys Val Glu  
 405 410 415

His Ser Asp Leu Val Phe Ser Lys Asp Trp Ser Phe Tyr Leu Leu Tyr  
 420 425 430

Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp Glu Tyr Ala Cys Arg Val  
 435 440 445

Asn His Val Thr Leu Ser Gln Pro Lys Ile Val Lys Trp Asp Arg Asp  
 450 455 460

Met Thr Gly His His His His His His  
 465 470

<210> 37

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer E1 Sense

<400> 37  
cacggtaccg atatggggtg cctgctgttt ctgc 34

<210> 38  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer E1 antisense

<400> 38  
cagaccggtc cagtagagga cgatgtcctg 30

<210> 39  
<211> 921  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Construct of extracellular domain of CD1d

<400> 39  
ggtaccgata tggggtgcct gctgtttctg ctgctctggg cgctcctcca ggcttgggga 60  
agcgctgaag tcccgcaaag gcttttcccc ctccgctgcc tccagatctc gtccttcgcc 120  
aatagcagct ggacgcgcac cgacggcttg gcgtggctgg gggagctgca gacgcacagc 180  
tggagcaacg actcggacac cgtccgctct ctgaagcctt ggtcccaggg cacgttcagc 240  
gaccagcagt gggagacgct gcagcatata tttcgggttt atcgaagcag cttcaccagg 300  
gacgtgaagg aattcgccaa aatgctacgc ttatcctatc ccttggagct ccaggtgtcc 360  
gctggctgtg aggtgcaccc tgggaacgcc tcaaataact tcttccatgt agcatttcaa 420  
ggaaaagata tcctgagttt ccaaggaact tcttgggagc caacccaaga ggccccactt 480  
tgggtaaact tggccattca agtgctcaac caggacaagt ggacgagggg aacagtgcag 540  
tggtcctta atggcacctg cccccaattt gtcagtggcc tccttgagtc aggggaagtcg 600  
gaactgaaga agcaagtga gccaaggcc tggctgtccc gtggccccag tcctggccct 660  
ggcgtctgc tgctggtgtg ccatgtctca ggattctacc caaagcctgt atgggtgaag 720  
tggatgcggg gtgagcagga gcagcagggc actcagccag gggacatcct gcccaatgct 780  
gacgagacat ggtatctccg agcaaccctg gatgtggtgg ctggggaggc agctggcctg 840  
tcctgtcggg tgaagcacag cagtctagag ggccaggaca tcgtcctcta ctggaccggt 900  
catcatcacc atcaccattg a 921

<210> 40  
<211> 303  
<212> PRT

<213> Artificial Sequence

<220>

<223> Construct of extracellular domain of CD1d

<400> 40

Met Gly Cys Leu Leu Phe Leu Leu Leu Trp Ala Leu Leu Gln Ala Trp  
1 5 10 15

Gly Ser Ala Glu Val Pro Gln Arg Leu Phe Pro Leu Arg Cys Leu Gln  
20 25 30

Ile Ser Ser Phe Ala Asn Ser Ser Trp Thr Arg Thr Asp Gly Leu Ala  
35 40 45

Trp Leu Gly Glu Leu Gln Thr His Ser Trp Ser Asn Asp Ser Asp Thr  
50 55 60

Val Arg Ser Leu Lys Pro Trp Ser Gln Gly Thr Phe Ser Asp Gln Gln  
65 70 75 80

Trp Glu Thr Leu Gln His Ile Phe Arg Val Tyr Arg Ser Ser Phe Thr  
85 90 95

Arg Asp Val Lys Glu Phe Ala Lys Met Leu Arg Leu Ser Tyr Pro Leu  
100 105 110

Glu Leu Gln Val Ser Ala Gly Cys Glu Val His Pro Gly Asn Ala Ser  
115 120 125

Asn Asn Phe Phe His Val Ala Phe Gln Gly Lys Asp Ile Leu Ser Phe  
130 135 140

Gln Gly Thr Ser Trp Glu Pro Thr Gln Glu Ala Pro Leu Trp Val Asn  
145 150 155 160

Leu Ala Ile Gln Val Leu Asn Gln Asp Lys Trp Thr Arg Glu Thr Val  
165 170 175

Gln Trp Leu Leu Asn Gly Thr Cys Pro Gln Phe Val Ser Gly Leu Leu  
180 185 190

Glu Ser Gly Lys Ser Glu Leu Lys Lys Gln Val Lys Pro Lys Ala Trp  
195 200 205

Leu Ser Arg Gly Pro Ser Pro Gly Pro Gly Arg Leu Leu Leu Val Cys  
210 215 220

His Val Ser Gly Phe Tyr Pro Lys Pro Val Trp Val Lys Trp Met Arg  
 225 230 235 240

Gly Glu Gln Glu Gln Gln Gly Thr Gln Pro Gly Asp Ile Leu Pro Asn  
 245 250 255

Ala Asp Glu Thr Trp Tyr Leu Arg Ala Thr Leu Asp Val Val Ala Gly  
 260 265 270

Glu Ala Ala Gly Leu Ser Cys Arg Val Lys His Ser Ser Leu Glu Gly  
 275 280 285

Gln Asp Ile Val Leu Tyr Trp Thr Gly His His His His His His  
 290 295 300

<210> 41  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> F(ab)-CD1d sense fragment

<400> 41  
 aattgcggcc gcaaaccatg ggatggagct gtatcatc

38

<210> 42  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> F(ab)-CD1d antisense fragment

<400> 42  
 cggggtacct gaccaccgc ctcttttctt gtccaccttg gtggtt

45

<210> 43  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> F(ab')<sub>2</sub>-CD1d sense fragment

<400> 43  
 aattgcggcc gcaaaccatg ggatggagct gtatcatc

38

<210> 44  
 <211> 45  
 <212> DNA



<213> Artificial Sequence  
 <220>  
 <223> F(ab')<sub>2</sub>-CD1d antisense fragment  
 <400> 44  
 cggggtacct gaccaccgc ctcctgggca cgggtgggcat gtgtg 45  
 <210> 45  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> IgG1-CD1d sense fragment  
 <400> 45  
 aattgcggcc gcaaaccatg ggatggagct gtatcatc 38  
 <210> 46  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> IgG1-CD1d antisense fragment  
 <400> 46  
 cggggtacct gaccaccgc ctcctttacc cggagacagg gagag 45  
 <210> 47  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Artificial sense primer to construct extracellular CD1d  
 <400> 47  
 cggggtaccg gaggcggtgg gtcagtcccg caaaggcttt tc 42  
 <210> 48  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Artificial antisense primer to construct extracellular CD1d  
 <400> 48  
 cgaccggtcc agtagaggac gatgtcctg 29  
 <210> 49  
 <211> 1264  
 <212> DNA  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nucleotide sequence of the chimeric F(ab)-CD1d product

&lt;400&gt; 49

```

gcgggcgcgcaa accatgggat ggagctgtat catcctcttc ttggtagcaa cagctacagg      60
cgcgcatatg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc      120
accctcctcc aagagcacct ctggggggcac agcgggccctg ggctgcctgg tcaaggacta      180
cttccccgaa ccggtgacgg tgctcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac      240
cttcccggtc gtcctacagt cctcaggact ctactccctc agcagcgtcg tgaccgtgcc      300
ctccagcagc ttggggcacc agacctacat ctgcaacgtg aatcacaagc ccagcaacac      360
caaggtggac aagaaaggag gcggtgggtc aggtaccgga ggcggtgggt cagtcccga      420
aaggcttttc cccctccgct gcctccagat ctcgctcttc gccaatagca gctggacgcg      480
caccgacggc ttggcgtggc tgggggagct gcagacgcac agctggagca acgactcgga      540
caccgtccgc tctctgaagc cttggtccca gggcacgttc agcgaccagc agtgggagac      600
gctgcagcat atatttcggg tttatcgaag cagcttcacc agggacgtga aggaattcgc      660
caaaatgcta cgcttatcct atcccttga gctccaggtg tccgctggct gtgaggtgca      720
ccctgggaac gcctcaaata acttcttcca tgtagcattt caaggaaaag atatcctgag      780
tttccaagga acttcttggg agccaacca agaggcccca ctttgggtaa acttggccat      840
tcaagtgtc aaccaggaca agtggacgag ggaaacagtg cagtggctcc ttaatggcac      900
ctgcccccaa tttgtcagtg gcctccttga gtcagggaag tcggaactga agaagcaagt      960
gaagcccaag gcctggctgt cccgtggccc cagtccctggc cctggccgctc tgctgctggt     1020
gtgccatgtc tcaggattct acccaaagcc tgtatgggtg aagtggatgc ggggtgagca     1080
ggagcagcag ggcactcagc caggggacat cctgcccaat gctgacgaga catggtatct     1140
ccgagcaacc ctggatgtgg tggctgggga ggcagctggc ctgtcctgtc ggggtgaagca     1200
cagcagtcta gagggccagg acatcgtcct ctactggacc ggtcatcatc accatcacca     1260
ttga                                                                    1264

```

&lt;210&gt; 50

&lt;211&gt; 416

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Polypeptide sequence of the chimeric F(ab)-CD1d product

&lt;400&gt; 50

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly

1		5		10		15											
Ala	His	Met	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val		
		20						25					30				
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala		
		35					40					45					
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser		
	50					55					60						
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val		
65					70					75					80		
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro		
				85					90					95			
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys		
			100					105					110				
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Gly	Gly	Gly	Gly	Ser	Gly	Thr		
		115					120					125					
Gly	Gly	Gly	Gly	Ser	Val	Pro	Gln	Arg	Leu	Phe	Pro	Leu	Arg	Cys	Leu		
	130					135					140						
Gln	Ile	Ser	Ser	Phe	Ala	Asn	Ser	Ser	Trp	Thr	Arg	Thr	Asp	Gly	Leu		
145					150					155					160		
Ala	Trp	Leu	Gly	Glu	Leu	Gln	Thr	His	Ser	Trp	Ser	Asn	Asp	Ser	Asp		
				165					170					175			
Thr	Val	Arg	Ser	Leu	Lys	Pro	Trp	Ser	Gln	Gly	Thr	Phe	Ser	Asp	Gln		
			180					185					190				
Gln	Trp	Glu	Thr	Leu	Gln	His	Ile	Phe	Arg	Val	Tyr	Arg	Ser	Ser	Phe		
	195						200					205					
Thr	Arg	Asp	Val	Lys	Glu	Phe	Ala	Lys	Met	Leu	Arg	Leu	Ser	Tyr	Pro		
	210					215				220							
Leu	Glu	Leu	Gln	Val	Ser	Ala	Gly	Cys	Glu	Val	His	Pro	Gly	Asn	Ala		
225					230					235					240		
Ser	Asn	Asn	Phe	Phe	His	Val	Ala	Phe	Gln	Gly	Lys	Asp	Ile	Leu	Ser		
			245						250					255			

Phe Gln Gly Thr Ser Trp Glu Pro Thr Gln Glu Ala Pro Leu Trp Val  
                   260                                  265                                  270

Asn Leu Ala Ile Gln Val Leu Asn Gln Asp Lys Trp Thr Arg Glu Thr  
                   275                                  280                                  285

Val Gln Trp Leu Leu Asn Gly Thr Cys Pro Gln Phe Val Ser Gly Leu  
                   290                                  295                                  300

Leu Glu Ser Gly Lys Ser Glu Leu Lys Lys Gln Val Lys Pro Lys Ala  
                   305                                  310                                  315                                  320

Trp Leu Ser Arg Gly Pro Ser Pro Gly Pro Gly Arg Leu Leu Leu Val  
                                   325                                  330                                  335

Cys His Val Ser Gly Phe Tyr Pro Lys Pro Val Trp Val Lys Trp Met  
                   340                                  345                                  350

Arg Gly Glu Gln Glu Gln Gln Gly Thr Gln Pro Gly Asp Ile Leu Pro  
                   355                                  360                                  365

Asn Ala Asp Glu Thr Trp Tyr Leu Arg Ala Thr Leu Asp Val Val Ala  
                   370                                  375                                  380

Gly Glu Ala Ala Gly Leu Ser Cys Arg Val Lys His Ser Ser Leu Glu  
                   385                                  390                                  395                                  400

Gly Gln Asp Ile Val Leu Tyr Trp Thr Gly His His His His His His  
                                   405                                  410                                  415

<210> 51

<211> 1312

<212> DNA

<213> Artificial Sequence

<220>

<223> Nucleotide sequence of the chimeric F(ab')<sub>2</sub>-CD1d product

<400> 51

gcggccgcaa accatgggat ggagctgtat catcctcttc ttggtagcaa cagctacagg 60

cgcgcatatg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc 120

accctectcc aagagcacct ctggggggcac agcggccctg ggctgectgg tcaaggacta 180

cttccccgaa ccggtgacgg tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac 240

cttcccggt gtcctacagt cctcaggact ctactcctc agcagcgctg tgaccgtgcc 300

```

ctccagcagc ttggggcaccc agacctacat ctgcaacgtg aatcacaagc ccagcaacac      360
caaggtggac aagaaagttg agcccaaadc ttgtgacaaa actcacacat gcccaccgtg      420
cccaggaggc ggtgggtcag gtaccggagg cggtgggtca gtcccgc aaa ggcttttccc      480
cctccgctgc ctccagatct cgtccttcgc caatagcagc tggacgcgca ccgacggctt      540
ggcgtggctg ggggagctgc agacgcacag ctggagcaac gactcggaca ccgtccgctc      600
tctgaagcct tgggtcccagg gcacgttcag cgaccagcag tgggagacgc tgcagcatat      660
atttcgggtt tatcgaagca gcttcaccag ggacgtgaag gaattcgcca aaatgctacg      720
cttatacctat cccttggagc tccaggtgtc cgctggctgt gaggtgcacc ctgggaacgc      780
ctcaaataac ttcttccatg tagcatttca aggaaaagat atcctgagtt tccaaggaac      840
ttcttgggag ccaacccaag aggccccact ttgggtaaac ttggccattc aagtgtcaa      900
ccaggacaag tggacgaggg aaacagtgc gtggctcctt aatggcacct gcccccaatt      960
tgtcagtggc ctcttgagt cagggaaagtc ggaactgaag aagcaagtga agcccaaggc     1020
ctggctgtcc cgtggcccca gtcctggccc tggccgtctg ctgctggtgt gccatgtctc     1080
aggattctac ccaaagcctg tatgggtgaa gtggatgcgg ggtgagcagg agcagcaggg     1140
cactcagcca ggggacatcc tgcccaatgc tgacgagaca tggatatctc gagcaaccct     1200
ggatgtggtg gctggggagg cagctggcct gtcctgtcgg gtgaagcaca gcagtctaga     1260
gggccaggac atcgtcctct actggaccgg tcatcatcac catcaccatt ga              1312

```

<210> 52

<211> 432

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide sequence of the chimeric F(ab')<sub>2</sub>-CD1d product

<400> 52

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Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10           15

```

```

Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
          20           25           30

```

```

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
          35           40           45

```

```

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
          50           55           60

```

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val  
65 70 75 80

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro  
85 90 95

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys  
100 105 110

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp  
115 120 125

Lys Thr His Thr Cys Pro Pro Cys Pro Gly Gly Gly Gly Ser Gly Thr  
130 135 140

Gly Gly Gly Gly Ser Val Pro Gln Arg Leu Phe Pro Leu Arg Cys Leu  
145 150 155 160

Gln Ile Ser Ser Phe Ala Asn Ser Ser Trp Thr Arg Thr Asp Gly Leu  
165 170 175

Ala Trp Leu Gly Glu Leu Gln Thr His Ser Trp Ser Asn Asp Ser Asp  
180 185 190

Thr Val Arg Ser Leu Lys Pro Trp Ser Gln Gly Thr Phe Ser Asp Gln  
195 200 205

Gln Trp Glu Thr Leu Gln His Ile Phe Arg Val Tyr Arg Ser Ser Phe  
210 215 220

Thr Arg Asp Val Lys Glu Phe Ala Lys Met Leu Arg Leu Ser Tyr Pro  
225 230 235 240

Leu Glu Leu Gln Val Ser Ala Gly Cys Glu Val His Pro Gly Asn Ala  
245 250 255

Ser Asn Asn Phe Phe His Val Ala Phe Gln Gly Lys Asp Ile Leu Ser  
260 265 270

Phe Gln Gly Thr Ser Trp Glu Pro Thr Gln Glu Ala Pro Leu Trp Val  
275 280 285

Asn Leu Ala Ile Gln Val Leu Asn Gln Asp Lys Trp Thr Arg Glu Thr  
290 295 300

Val Gln Trp Leu Leu Asn Gly Thr Cys Pro Gln Phe Val Ser Gly Leu

305		310		315		320
Leu Glu Ser Gly	Lys Ser Glu Leu Lys	Lys Gln Val Lys	Pro Lys Ala			
	325	330	335			
Trp Leu Ser Arg Gly	Pro Ser Pro Gly	Pro Gly Arg Leu	Leu Leu Val			
	340	345	350			
Cys His Val Ser Gly	Phe Tyr Pro Lys	Pro Val Trp Val	Lys Trp Met			
	355	360	365			
Arg Gly Glu Gln Glu	Gln Gln Gly Thr	Gln Pro Gly Asp	Ile Leu Pro			
	370	375	380			
Asn Ala Asp Glu Thr	Trp Tyr Leu Arg	Ala Thr Leu Asp	Val Val Ala			
	385	390	395	400		
Gly Glu Ala Ala Gly	Leu Ser Cys Arg	Val Lys His Ser	Ser Ser Leu Glu			
	405	410	415			
Gly Gln Asp Ile Val	Leu Tyr Trp Thr	Gly His His His	His His His			
	420	425	430			

&lt;210&gt; 53

&lt;211&gt; 1963

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Nucleotide sequence of the chimeric IgG1-CD1d product

&lt;400&gt; 53

gcggccgcaa accatgggat ggagctgtat catcctcttc ttggtagcaa cagctacagg	60
cgcgcatatg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc	120
accctcctcc aagagcacct ctgggggcac agcggccctg ggctgcctgg tcaaggacta	180
cttccccgaa ccggtgacgg tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac	240
cttcccggtc gtctacagt cctcaggact ctactccctc agcagcgctc tgaccgtgcc	300
ctccagcagc ttggggcacc agacctacat ctgcaacgtg aatcacaagc ccagcaacac	360
caaggtggac aagaaagttg agcccaaadc ttgtgacaaa actcacacat gccaccgtg	420
cccagcacct gaactcctgg ggggaccgtc agtcttctc tccccccaa aaccaagga	480
caccctcatg atctcccga cccctgaggt cacatgcgtg gtggtggacg tgagccacga	540
agaccctgag gtcaagttca actggtacgt ggacggcgtg gaggtgcata atgccaagac	600
aaagccgcgg gaggagcagt acaacagcac gtaccgtgtg gtcagcgctc tcaccgtcct	660

```

gcaccaggac tggctgaatg gcaaggagta caagtgcaag gtctccaaca aagccctccc 720
agcccccatc gagaaaacca tctccaaagc caaagggcag ccccgagaac cacagggtgta 780
caccctgccc ccatcccggg atgagctgac caagaaccag gtcagcctga cctgcctggt 840
caaaggcttc tatcccagcg acatcgccgt ggagtgggag agcaatgggc agccggagaa 900
caactacaag accacgcctc ccgtgctgga ctccgacggc tccttcttcc tctacagcaa 960
gctcacctg gacaagagca ggtggcagca ggggaacgtc ttctcatgct ccgtgatgca 1020
tgaggctctg cacaaccact acacgcagaa gagcctctcc ctgtctccgg gtaaaggagg 1080
cgggtgggtca ggtaccggag gcggtgggtc agtcccgcaa aggttttcc cctccgctg 1140
cctccagatc tcgtccttcg ccaatagcag ctggacgcgc accgacggct tggcgtggct 1200
gggggagctg cagacgcaca gctggagcaa cgactcggac accgtccgct ctctgaagcc 1260
ttggtcccag ggcacgttca gcgaccagca gtgggagacg ctgcagcata tatttcgggt 1320
ttatcgaagc agcttcacca gggacgtgaa ggaattcgcc aaaatgctac gcttatccta 1380
tccttggag ctccaggtgt ccgtggctg tgaggtgcac cctgggaacg cctcaaataa 1440
cttcttccat gtagcatttc aaggaaaaga taccctgagt ttccaaggaa cttcttggga 1500
gccaacccaa gagggcccac tttgggtaaa cttggccatt caagtgtca accaggacaa 1560
gtggacgagg gaaacagtgc agtggctcct taatggcacc tgcccccaat ttgtcagtgg 1620
cctccttgag tcaggggaagt cggaactgaa gaagcaagtg aagcccaagg cctggctgtc 1680
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aggggacatc ctgcccattg ctgacgagac atggtatctc cgagcaaccc tggatgtggt 1860
ggctggggag gcagctggcc tgtcctgtcg ggtgaagcac agcagtctag agggccagga 1920
catcgtcttc tactggaccg gtcacatca ccatcaccat tga 1963

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<210> 54

<211> 649

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide sequence of the IgG1CD1d product

<400> 54

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Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1           5           10          15

```

```

Ala His Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val

```



20					25					30					
Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala
		35					40					45			
Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser
	50					55					60				
Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val
65						70					75				80
Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro
				85					90					95	
Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys
			100					105					110		
Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp
		115					120					125			
Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly
	130					135					140				
Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile
145						150					155				160
Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu
				165					170					175	
Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His
			180					185					190		
Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg
		195					200					205			
Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys
	210					215					220				
Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu
225						230					235				240
Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr
				245					250					255	
Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu
			260					265					270		

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp  
 275 280 285

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val  
 290 295 300

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp  
 305 310 315 320

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His  
 325 330 335

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro  
 340 345 350

Gly Lys Gly Gly Gly Gly Ser Gly Thr Gly Gly Gly Gly Ser Val Pro  
 355 360 365

Gln Arg Leu Phe Pro Leu Arg Cys Leu Gln Ile Ser Ser Phe Ala Asn  
 370 375 380

Ser Ser Trp Thr Arg Thr Asp Gly Leu Ala Trp Leu Gly Glu Leu Gln  
 385 390 395 400

Thr His Ser Trp Ser Asn Asp Ser Asp Thr Val Arg Ser Leu Lys Pro  
 405 410 415

Trp Ser Gln Gly Thr Phe Ser Asp Gln Gln Trp Glu Thr Leu Gln His  
 420 425 430

Ile Phe Arg Val Tyr Arg Ser Ser Phe Thr Arg Asp Val Lys Glu Phe  
 435 440 445

Ala Lys Met Leu Arg Leu Ser Tyr Pro Leu Glu Leu Gln Val Ser Ala  
 450 455 460

Gly Cys Glu Val His Pro Gly Asn Ala Ser Asn Asn Phe Phe His Val  
 465 470 475 480

Ala Phe Gln Gly Lys Asp Ile Leu Ser Phe Gln Gly Thr Ser Trp Glu  
 485 490 495

Pro Thr Gln Glu Ala Pro Leu Trp Val Asn Leu Ala Ile Gln Val Leu  
 500 505 510

Asn Gln Asp Lys Trp Thr Arg Glu Thr Val Gln Trp Leu Leu Asn Gly  
 515 520 525

Thr Cys Pro Gln Phe Val Ser Gly Leu Leu Glu Ser Gly Lys Ser Glu  
 530 535 540

Leu Lys Lys Gln Val Lys Pro Lys Ala Trp Leu Ser Arg Gly Pro Ser  
 545 550 555 560

Pro Gly Pro Gly Arg Leu Leu Leu Val Cys His Val Ser Gly Phe Tyr  
 565 570 575

Pro Lys Pro Val Trp Val Lys Trp Met Arg Gly Glu Gln Glu Gln Gln  
 580 585 590

Gly Thr Gln Pro Gly Asp Ile Leu Pro Asn Ala Asp Glu Thr Trp Tyr  
 595 600 605

Leu Arg Ala Thr Leu Asp Val Val Ala Gly Glu Ala Ala Gly Leu Ser  
 610 615 620

Cys Arg Val Lys His Ser Ser Leu Glu Gly Gln Asp Ile Val Leu Tyr  
 625 630 635 640

Trp Thr Gly His His His His His His  
 645